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Incomes, Capabilities, and Mortality Decline

Much research has been devoted in recent years to identifying causes of cross-national variation in premature mortality, as measured by such indicators as infant mortality and life expectancy at birth. This research addresses an important topic. Avoidance of early death is a necessary condition for anything else we might wish to achieve. Also, societies with high rates of early death tend to suffer from other sorts of deprivations. Hence, it is well worth identifying reasons why premature mortality is lower, or falls faster, in some societies than in others.

Public health issues are neglected in the literature on the comparative politics of developing countries, and political science issues are neglected in the field of public health. By connecting a public health issue to a political science issue, this book encourages dialogue between the two fields. On the public health side, its aim is to weigh the importance of social service provision on the one hand, and of economic output- and income-related factors on the other, on infant mortality levels and changes in developing countries from 1960 to 2005. On the political science side, the goal of the book is to explain why some developing country governments did better than others at designing and implementing mortality-reducing social services.

The analyses reported in this book challenge some conventional wisdom about economic and social progress in developing countries. Such progress is typically measured according to economic output- and income-related indicators like GDP per capita, income inequality, and income poverty. These measures capture some important inputs into human well-being, but the impact of economic output and income on human capabilities is shaped and constrained by a multitude of antecedent and intervening factors. Avoidance of early death, this analysis will argue, has a more direct relation than any economic factor to an individual's capacity to live the life that he or she has reason to choose. Accordingly, indicators of premature mortality, especially of infant and child mortality, will serve in this analysis as the main criteria of development achievement.

If the literature on development in poor and middle-income countries has been excessively concerned with output- and income-related indicators, the literature on social policy in such countries has been unduly preoccupied with issues of public spending and social insurance coverage. Our concern must be fundamentally with the expansion of human capabilities, particularly those related to physical functioning and survival, and only secondarily with the policy outputs that may facilitate those fundamental outcomes. The analyses reported here find that, at least in the middle-income developing societies on which this book focuses, neither a low level of public health spending, nor a low share of the population covered by contributory health insurance, presents an insurmountable obstacle to rapid mortality decline. From the standpoint of improving survival-related capabilities, the crucial policy output seems to be neither the amount of public health spending, nor the share of the population covered by health insurance, but the existence of government programs that provide, free of charge to the user, inexpensive basic health care to people (including uninsured people) who run a high risk of early death.

The wave of democratization that swept the world in the 1990s raised interest in the issue of whether democracy, whatever its intrinsic merits, improves the well-being of the poor. Exploration of this issue has focused mostly on the proposition that political leaders in democracies, unlike in authoritarian regimes, have an interest in winning votes, and that this interest should encourage them to advocate the provision of social services to the disadvantaged. Less attention has been paid to other dimensions of democracy – the freedom to transmit and receive information; the freedom to associate and organize; and changes in citizen expectations shaped by egalitarian ideals that are reinforced by habituation to democratic practice – that might also contribute to such provision. This study explores these other dimensions of democracy, as well as electoral incentives.

1.1. Economic Affluence, Social Service Provision, and Mortality

Two main hypotheses guide research on the causes of cross-societal variation in premature mortality. The "wealthier is healthier" hypothesis proposes that economic output and purchasing power are crucial.[1] An alternative "social service provision" hypothesis emphasizes government financing or delivery of basic services, including health care, education, family planning, safe water, and sanitation.[2] To the extent that each of these hypotheses is true, important implications follow for public action by citizens and governments. To the extent that economic output and income-related factors influence mortality levels and changes, public action should favor policies aimed at boosting

[1] Filmer and Pritchett 1999; Pritchett and Summers 1996.
[2] Caldwell 1986; Drèze and Sen 1989; Ghai ed. 2000; Halstead, Walsh, and Warren eds. 1985; Mehrotra and Jolly eds. 1997; Vallin and López eds. 1985.

economic growth and private incomes.[3] To the extent that the public financing or provision of basic social services influences mortality levels and changes, public action should favor the delivery of such services, accessible to populations at any income level and regardless of insurance coverage, to minimize mortality in high-risk populations. Indeed, insurance coverage, although a central focus of the literature about the welfare state in developing countries (as well as in debates about health care provision in the United States), appears to have had surprisingly limited effects on the pattern or pace of mortality decline in the eight societies studied closely in this book: Argentina, Brazil, Chile, and Costa Rica in Latin America, and Indonesia, South Korea, Taiwan, and Thailand in East Asia.

The wealthier is healthier conjecture comes in three variants that adopt respectively a narrow, intermediate, and broad definition of "wealthier." The narrow variant holds that the higher the level (or the larger the rise) of Gross Domestic Product (GDP) per capita, the lower the level (or the steeper the decline) of premature mortality. At least three mechanisms could mediate these effects. First, a high level or large rise of GDP per capita could create more survival-enhancing physical assets (e.g., roads). Second, a high level or large rise of GDP per capita could generate more private income, allowing households to buy more or better survival-enhancing goods and services (e.g., food, housing, clothing) in private markets. Third, a high level or large rise of GDP per capita could produce more resources for the public financing or provision of survival-enhancing social services.

The narrow version of the wealthier is healthier hypothesis, which focuses only on GDP per capita (setting aside income inequality and income poverty), is useful for depicting how the eight East Asian and Latin American societies studied closely in this book fared, in relation to other developing countries, on GDP per capita and infant mortality at the start of the twenty-first century. In Figure 1.1, infant mortality in 2005 is regressed on GDP per capita in 2005, using a natural log transformation of all values, as is a standard practice in research on this association. In Figure 1.2, the average annual percent decline of infant mortality from 1960 to 2005 is regressed on the average annual percent growth of GDP per capita from 1960 to 2005. In each analysis, the universe of cases consists of the 93 developing countries with information on both infant mortality (World Bank 2008e) and GDP per capita (Maddison 2007) in both 1960 and 2005.

To the extent that the narrow version of the wealthier is healthier hypothesis is supported by the data, we would expect to see regression lines with steep slopes and tightly clustered data points. In other words, to the extent that the

[3] Cutler, Deaton, and Lleras Muney (2006: 110) write that "In recent years, a number of authors have followed Pritchett and Summers (1996) and argued from cross-country regressions that income is more important [to health] than any other factors, and have endorsed policies that downplay the role of any deliberate public action in health improvement. According to this view, if countries are growing, the health of their inhabitants will look after itself."

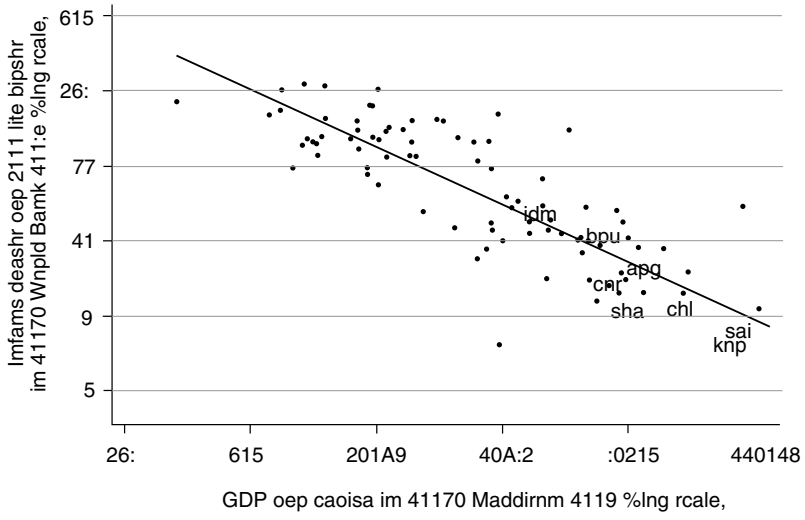

FIGURE 1.1. GDP per capita and Infant Mortality Level, 93 Countries in 2005. R-Square = .69. Output and data in Web Appendices C7 and D1 (McGuire 2009). Symbols: Argentina: arg; Brazil: brz; Chile: chl; Costa Rica: cos; Indonesia: idn; South Korea: kor; Taiwan: tai; Thailand: tha.

narrow version of the hypothesis accords with the evidence, GDP per capita should be a good predictor of the rate of infant mortality at a given point in time ("level"), as well as of the overall amount of infant mortality decline during an extended period of time ("progress").

On these criteria, the evidence for the narrow version of the hypothesis is moderately supportive. The level of GDP per capita in 2005 was a good predictor of the level of infant mortality in 2005. The regression line sloped downward, as expected, and the observations clustered tightly around it (Figure 1.1; R-square = .69). The average annual rate of GDP per capita growth was a weaker predictor of the average annual rate of infant mortality decline from 1960 to 2005. Although the regression line sloped upward, as expected, the observations clustered only loosely around it (Figure 1.2; R-square = .18). In other words, even at similar levels of GDP per capita growth during the period from 1960 to 2005, countries varied widely on the steepness of infant mortality decline – much more widely than was the case when the analysis focused on level.

In cross-national research, the study of variation in infant mortality changes is often more instructive, from both theoretical and practical standpoints, than the study of variation in infant mortality levels. It matters considerably, then, that the narrow variant of the wealthier is healthier hypothesis predicted a country's level of infant mortality much better than it predicted a country's progress at reducing infant mortality. A focus exclusively on cross-national

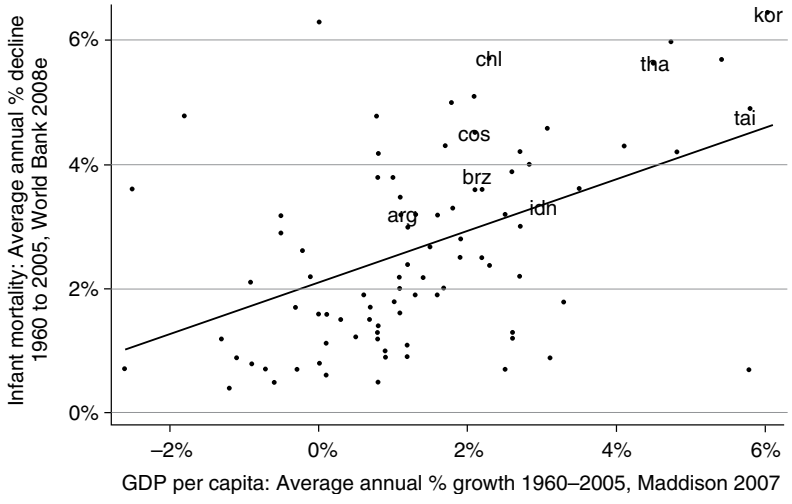

FIGURE 1.2. GDP per capita Growth and Infant Mortality Decline, 93 Countries 1960–2005.

R-Square = .18. Output and data in Web Appendices C7 and D1 (McGuire 2009). Symbols: Argentina: arg; Brazil: brz; Chile: chl; Costa Rica: cos; Indonesia: idn; South Korea: kor; Taiwan: tai; Thailand: tha.

differences in infant mortality levels at a given point in time, neglecting cross-national differences in progress at reducing infant mortality over a particular span of time, would bias findings toward the wealthier is healthier hypothesis and the policy and institutional design recommendations that typically accompany it.

An intermediate version of the wealthier is healthier hypothesis includes under "wealth" not only GDP per capita, but also income inequality and income poverty. Income inequality affects infant mortality partly by increasing income poverty. Higher income poverty, in turn, raises the likelihood of infant death by constraining household purchases of survival-related goods and services in private markets, as well as by making it hard for poor people to utilize ostensibly free public health services (e.g., by taking time away from work or paying for public transport). Even controlling for income poverty, however, higher income inequality seems to be associated with higher mortality.[4] Higher income inequality has been found to raise psychological stress, to deepen feelings of depression, to encourage risk-taking behavior, to reduce social cohesion, and to deter investment in social services.[5] In the cross-national quantitative analysis reported in Chapter 2, higher income inequality

[4] Eibner and Evans 2005; Kennedy, Kawachi, and Prothrow-Stith 1996.

[5] Lynch et al. 2000; Marmot and Wilkinson 2001; Rojroongwasinkul 2004; Wilkinson 2001.

was associated with higher infant mortality even after controlling for GDP per capita (Table 2.2).

The broad version of the wealthier is healthier hypothesis defines "wealth" to include not only economic output and income, but also "socioeconomic" factors such as ethnic diversity, religion, fertility, urbanization, geographical location, population density, and sometimes educational attainment. Filmer and Pritchett (1999) found that GDP per capita, income inequality, mean years of female schooling, ethnolinguistic fractionalization, and a population more than 90 percent Muslim jointly explained about 95 percent the variance in infant and under-5 mortality across about 100 countries (both developing and industrialized) in 1990. Likewise, the cross-national analysis reported in Chapter 2, which is partly modeled on the Filmer and Pritchett (1999) study, found that an overlapping set of socioeconomic variables – GDP per capita, income inequality, fertility, urbanization, population density, ethnolinguistic fractionalization, and having a population that is more than 90 percent Muslim – jointly explained about 84 percent of the variance in infant and under-5 mortality across about 100 developing countries in 1990.

The quantitative analysis in Chapter 2, the case studies in Chapters 3–10, and the comparative analysis of the eight cases in Chapter 11 juxtapose the intermediate version of the wealthier is healthier hypothesis, which focuses on economic output- and income-related indicators (GDP per capita, income inequality, and income poverty), to an alternative: that mortality rises and falls according to the scope and quality of education, family planning, safe water, sanitation, and basic health care and nutrition services. According to this alternative social service provision conjecture, the state's (and to a lesser extent the private sector's) ability to deliver basic social services of decent quality to most of the disadvantaged population, and the propensity of a country's poor people to utilize those services, has a strong and robust impact on the pattern and pace of infant mortality decline, independent of economic circumstances. The social service provision hypothesis does not directly contradict the wealthier is healthier hypothesis. The basic proposition that wealth promotes health is not questioned. The social service provision conjecture serves rather as a lens through which to try to construct guidelines for public action by extracting policy and institution-building lessons from national and subnational experiences that are anomalous according to the wealthier is healthier conjecture. In Chile in the 1970s, neither slow economic growth, nor high income inequality, nor a repressive authoritarian regime prevented a breathtaking plunge in the infant mortality rate. In Indonesia in the 1970s, neither fast economic growth, nor low income inequality, nor a repressive authoritarian regime produced anything more than a sluggish decline of infant mortality. The social service provision proposition raises the questions of what policies were enacted in Chile, but not in Indonesia, to produce a rapid decline of the infant mortality rate, and why the Chilean government, but not the Indonesian government, designed, approved, and implemented those policies.

Varying combinations of economic achievements and social service provisioning seem to have been at work in the eight cases compared in this book.

In South Korea and Thailand, fast economic growth and stable income inequality contributed significantly to the rapid decline of infant mortality, although public service provision played an underappreciated role in both countries. In Chile and Costa Rica, the effective public provision of basic social services to the poor produced an almost equally steep fall of infant mortality, despite slow economic growth and rising income inequality. The cross-national analysis reported in Chapter 2 confirms that the provision and utilization of basic health, education, family planning, water, and sanitation services is strongly and significantly associated with infant mortality, even controlling for GDP per capita, income inequality, and other socioeconomic factors.

The wealthier is healthier and social service provision hypotheses have differing policy implications. Studies whose findings support the wealthier is healthier hypothesis are often taken to imply that policy-makers who wish to accelerate the pace of infant mortality decline would be best advised to focus most of their efforts on economic growth, or perhaps on reducing income inequality. This study finds, on the contrary, that although wealthier is indeed often healthier, the effective provision of basic social services to the poor can lead to sharp declines of infant mortality, even in the face of dramatic failures on the economic front; and that neither fast economic growth nor falling income inequality guarantees a rapid reduction of the infant mortality rate. Moreover, even though it may well be desirable to reduce infant mortality by sharply accelerating economic growth, or by dramatically redistributing income in favor of the poor, such achievements are not always feasible. In such cases, the public financing or provision of basic, and usually quite inexpensive, health, education, family planning, water, and sanitation services often provides a more practical means to the same end.

1.2. Democracy and the Provision of Social Services

Political regime form affects mortality rates primarily, although not exclusively, through its impact on public policies, especially policies concerned with the delivery of basic services to people who run a high risk of early death. A main concern of this book is to explore the hypothesis that governments in democracies tend more than governments in authoritarian regimes to enact mortality-reducing social policies. To this end, a basic definition of democracy is in order. The term democracy will be used in this book to refer to a political regime with fair elections, basic human and civil rights, and autonomy for elected officials. The first criterion means that political leaders must be chosen in fair and periodic competitive elections in which virtually all adult citizens have the right to vote and to stand for office. The second criterion means that citizens must be granted in principle, and not systematically denied in practice, basic rights like freedom from physical abuse by agents of the state, freedom of speech and the press, freedom of association and assembly, and the right to petition the government. The third criterion implies that the decisions of elected officials should not be vetoed or undermined systematically by

unelected power-holders (e.g., military leaders, local bosses, guerrilla groups, or foreign governments).[6]

These criteria for democracy are similar to those that Robert Dahl used to define polyarchy, the set of institutions that is necessary, according to Dahl, to achieve the highest feasible attainment of the democratic process in a modern nation-state. Democracy, for Dahl, is not a set of institutions, but rather a process for making binding decisions, that is, decisions that all members of a political community have a duty to obey. A democratic process has criteria of its own (enlightened understanding, effective participation, voting equality at the decisive stage, control of the agenda, enfranchisement of almost all adult citizens), but some of these criteria are very demanding, and full democracy, according to Dahl, is probably unattainable.[7] In principle, it is useful to distinguish an ideal democratic process from the polyarchic institutions required to realize or approximate such a process in a modern nation-state. In conventional language, however, the term "democracy" is usually used to refer to a set of institutions similar to the ones that Dahl subsumes under the rubric of polyarchy. In a concession to conventional language, the term democracy will be used in this book to refer to the three institutional criteria set forth in the preceding paragraph, rather than to the ideal process for making binding decisions that these institutional criteria may approximate.

Democracy may be vindicated instrumentally, by its beneficial consequences for survival or for some other human development outcome; affirmed intrinsically, as a good thing in itself (or at least as immediately necessary for living a good life); or justified constructively, by its role in fostering the discussion and interaction that enables individuals to decide what is desirable and what is possible.[8] This book focuses mainly on the instrumental dimension. On this front, it is notable that among the societies most often cited as having achieved "good health at low cost" (China, Chile, Costa Rica, Cuba, the Indian state of Kerala, Jamaica, and Sri Lanka), all but China had considerable democratic experience during the twentieth century. Costa Rica, Kerala/India, Jamaica, and Sri Lanka were long-standing democracies, Chile was democratic before and after the 1973–1990 military regime, and Cuba in the 1930s and 1940s had competitive elections and an independent press.[9] The average level of democratic experience in these cases is much higher than in most other developing countries. The preponderance of democratic regimes among the good health at low cost societies, as well as cross-national evidence that greater democracy is associated with lower infant mortality,[10] suggest that it is well

[6] McGuire 1997: 12–14.
[7] Dahl 1989: Chapter 8; Dahl 1998: 37–38, 85–86.
[8] Sen 1999a: 148.
[9] McGuire and Frankel 2005.
[10] Bhalla 1997: 225–226; Dasgupta 1993: 117–121; Gerring and Thacker 2001; Moon 1991: 142; Przeworski et al. 2000: 228; Zweifel and Navia 2000. Ross (2006), however, finds no effect of democracy on infant mortality.

worth exploring whether democracy might influence the public financing or provision of mortality-reducing social services.

Democracy could affect the utilization of publicly funded or publicly provided social services by changing electoral incentives, by enhancing freedom of expression, by broadening freedom of association and assembly, or by shaping citizen expectations about the proper role for the state in financing or delivering social services. Most studies of the association between democracy and public service provision have focused on electoral incentives, noting that "rulers have the incentive to listen to what people want if they have to face their criticism and seek their support in elections."[11] The median voter hypothesis holds that income under majority rule should be redistributed to those who have less to the extent that democratization (e.g., the extension of the franchise) pulls the income of the voter with the median income below the mean income of all voters.[12] This hypothesis can be transferred from the public redistribution of private incomes to the public provision of social services. As democratization enfranchises a higher share of people inadequately served by public social services, vote-maximizing politicians should try to improve the quality, quantity, and accessibility of such services. Such electoral incentives could result in greater public spending on social services, but they could also produce the reallocation of such spending to uses that politicians believe will win the votes of the previously underserved, or improve the efficiency or effectiveness of public social spending. The latter mechanisms could improve access to and utilization of social services without higher public social spending.

Empirically, however, democratization in poor countries often does not lead to the improved provision of basic social services to the poor. Keefer and Khemani explain this unexpected outcome by noting that some of the assumptions of the median voter hypothesis may not hold in newly democratizing developing countries. In many such countries, Keefer and Khemani point out, voters lack information about incumbent performance; doubt that challengers can deliver what they have promised; or prefer to vote according to religious, regional, or ethnic identity rather than on the basis of a candidate's perceived capacity to deliver basic services.[13] It might be added, moreover, that even when voters in any country cast their ballots on the basis of policy preferences, their preferred policies will not necessarily be conducive to rapid mortality decline. For example, voters in rich and poor countries alike tend to demand curative services excessively and preventive services insufficiently, so politicians who seek their support may well promise and implement policies that are not optimal for mortality decline. A preoccupation with curative at the expense of preventive health services could help to explain

[11] Sen 1999a: 152 (quotation); Ghobarah, Huth, and Russett 2004: 78; Lake and Baum 2001: 598.
[12] Meltzer and Richard 1981.
[13] Keefer and Khemani 2005; see also World Bank 2004a: 81–85.

why democratization is sometimes found to be associated with a decline of immunization coverage.[14]

Persuasive arguments thus exist both for and against the hypothesis that electoral incentives promote the public provision or public financing of mortality-reducing social services, or encourage their more widespread or effective utilization. Electoral incentives could even inhibit the public provision of such services, such as by encouraging political leaders to shift resources from preventive to curative health care, as majorities would often prefer. It is unlikely that each of the ways in which democracy could promote the financing, provision, or utilization of mortality-reducing social services is fully operational and effective, whereas none of the ways in which democracy could inhibit such outcomes functions or has an impact on policy. The argument advanced in this book is not that electoral incentives invariably promote the public financing or provision of mortality-reducing social services, but rather that such incentives, along with other forces arising from democratic political regimes, can either promote or inhibit such policy outputs, depending on the context. On balance, the present study finds, democracy does more to promote than to inhibit the delivery of mortality-reducing social services, and to encourage their utilization. That conclusion does not imply, however, that democracy never has any effects that are inimical to such outcomes.[15]

Democracy involves more than elections. Freedom of expression, another aspect of democracy, enables journalists and others to call attention to social problems, including deficiencies in social services. Drèze and Sen argue that democracy reduces the risk of famine, both because it implies freedom of the press, which allows news of a potential famine to spread and encourages elites to take preventive action; and because it involves political competition, which makes the failure to respond to a threatened famine a risky proposition for an incumbent seeking reelection. Drèze and Sen are less optimistic that press freedom will lead to policies that help to reduce chronic poverty. Day-to-day hunger, they point out, is less newsworthy than impending famine, and is also harder to defeat.[16] Although Drèze and Sen make a strong case that democracy is likely to be better at preventing famine than at relieving endemic hunger, they also underscore instances (in Chile, Costa Rica, Sri Lanka, and the Indian state of Kerala) in which a free press and adversarial politics have contributed to the expansion of basic capabilities. The fewer the impediments to the free flow of information, the easier it is to publicize social problems, whether chronic or acute. Calling attention to serious social problems is, in turn, a supportive (but not sufficient) condition for the design, authorization, and implementation of policies conducive to mortality decline.

[14] Gauri and Khaleghian 2002: 2124–2125.
[15] This perspectivist epistemology is developed in McGuire, W.J. 1999: 395–432; see also Jost, Banaji, and Prentice, eds. 2004.
[16] Drèze and Sen 1989: 84, 214.